

Listing of Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1-13. (Withdrawn).

14. (Currently Amended) A flow-through assay device for detecting the presence or quantity of an analyte residing in a test sample, said flow-through assay device comprising a porous membrane in communication with optical detection probes conjugated with a first antibody specific for the analyte, said porous membrane defining:

a competitive zone that contains a second antibody immobilized on said porous membrane that is complexed to an antigen containing an optically detectable substance, said antigen being identical to or an analog of the analyte and said optically detectable substance being capable of producing a competitive signal when contained within said competitive zone; and

a detection zone within which a third antibody is immobilized that is configured to bind to complexes formed between the analyte and said conjugated optical detection probes to produce a first detection signal, said third antibody also being configured to bind to said antigen from said competitive zone to produce a second detection signal, wherein the amount of the analyte within the test sample is determined from said competitive signal, and at least one of said first detection signal, and said second detection signal, ~~or combinations thereof.~~

15. (Original) A flow-through assay device as defined in claim 14, wherein said optical detection probes and said optically detectable substance of said antigen each comprise a visual label.

16. (Original) A flow-through assay device as defined in claim 14, wherein said optical detection probes and said optically detectable substance of said antigen each comprise a luminescent compound.

17. (Original) A flow-through assay device as defined in claim 16, wherein said detection probes emit a signal at a different wavelength than said optically detectable substance of said antigen.

18. (Original) A flow-through assay device as defined in claim 14, wherein said porous membrane further defines a calibration zone that is configured to produce a calibration signal.

19. (Original) A flow-through assay device as defined in claim 14, wherein the amount of the analyte within the test sample is capable of being determined from one or both of the following formulae: $D_{sub.1} = x$, when $x > 0$, $D_{sub.1} = D_{sub.1max}$ wherein, $x = C_{sub.1max} - C_{sub.1}$; $C_{sub.1max}$ is a predetermined maximum intensity for said competitive signal; $C_{sub.1}$ is the intensity of said competitive signal; $D_{sub.1}$ is the intensity of said first detection signal; and $D_{sub.1max}$ is a predetermined maximum intensity for said first detection signal; or $D_{sub.1} = D_{sub.1} + D_{sub.2}$, when $D_{sub.2} > 0$, $D_{sub.1} = D_{sub.1max}$ wherein, $D_{sub.1}$ is the intensity of said first detection signal; $D_{sub.1max}$ is a predetermined maximum intensity for said first detection signal; and $D_{sub.2}$ is the intensity of said second detection signal.

20-28 (Withdrawn).